

U.S. DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
SALEM DISTRICT, CASCADES FIELD OFFICE

**Categorical Exclusion Documentation Format When Using
Categorical Exclusions Not Established by Statute and Decision Record**

Categorical Exclusion Document

A. Background

BLM Office: Cascades Field Office

Lease/Serial/Case File No: N/A

Categorical Exclusion Number: DOI-BLM-ORWA-S040-2013-0005-CX

Date: January 20, 2015

Proposed Action Title/Type: Jungle Gem Thinning

Location of Proposed Action: Section 1 of Township 8 South, Range 2 East, Willamette Meridian (Figure 1).

Land Use Allocation(s): Late Successional Reserve and Riparian Reserve.

Description of Proposed Action:

The Proposed Action is a commercial thinning of conifer stands approximately 73 years old within 47 acres of Late Successional Reserve (LSR) and 3 acres of Riparian Reserve (RR) Land Use Allocations (LUA) for a total of 50 acres. The stand is primarily western hemlock (*Tsuga heterophylla*) and Douglas-fir (*Pseudotsuga menziesii*), with an understory of sparse sword fern (*Polysitichum munitum*).

Approximately 0.32 miles of temporary road will be built and decommissioned to access the units and reduce skidding length. Three one acre low density thinning patches will be created to encourage early-seral vegetation and wildlife habitat diversity. One to two trees per acre will be girdled to accelerate additional snags for habitat improvement.

Project Design Features:

The Proposed Action will thin 50 acres, leaving approximately 70 trees per acre and retaining the healthiest, best formed trees. The objective of this thinning prescription is to enhance late successional habitat. The low density thinning treatments consisting of three one acre patches will promote early-seral habitat in the stand.

Figure 1: Unit Location

Jungle Gem CX

5/11/2016

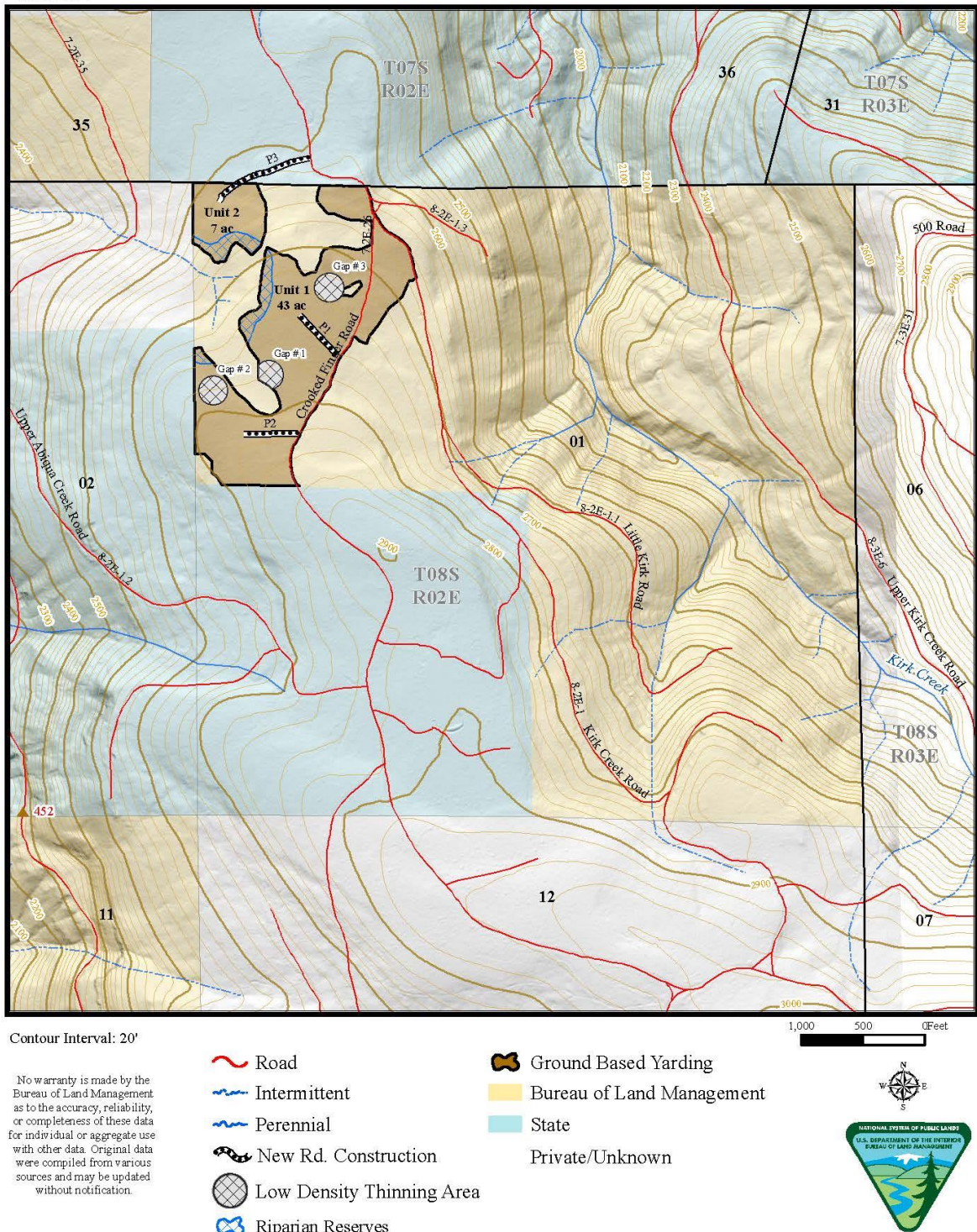


Table 1 describes the current stand conditions for the proposed thinning unit and the anticipated average post treatment conditions.

Table 1: Current and post treatment stand conditions

Jungle Gem Treatment Table	Current Condition	Post Treatment
Acres	50	50
Stand age	73	73
Trees per acre	233	70
Quadratic Mean Diameter (QMD)	16.1	21.1
Basal Area (square feet)	330	170
Curtis RD	82	37
Crown Closure	87	63

The Proposed Action will retain:

- Existing snags 15' tall and 15" DBH and larger at the large end
- Existing down wood 20' tall and 20" diameter and larger at the large end.
- Hardwoods 8" DBH and greater within the stand.
- Trees 21" DBH and larger.
- Minor conifer species, to promote diversity in the stand.

Trees designated for retention will be orange marked, including some trees around existing snags for additional protection from logging activities. To accelerate snags for habitat improvement 1 to 2 trees per acre will be girdled at the base.

In the Riparian Reserve LUA, "no-harvest" buffers would be established on all intermittent streams within the unit boundaries. The buffers would be a minimum slope distance of 120 feet in width.

Approximately 1,725 feet of temporary road will be constructed to access the thinning area for ground-based logging activities. The roads will be constructed and utilized during periods of low soil moisture and then stabilized and closed after hauling activities are complete.

Stabilizing and closing of the constructed temporary roads and associated skid trails could include the piling of logging debris and stumps on the surface, a debris barricade at the entrance and water bars.

Table 2: Season of restrictions

Season of Operation	Operation	Objective
During periods of high tree sap flow generally, during April 1 st to June 15 th	No cutting except in R-O-W's	To protect residual trees
During periods of high soil moisture, generally November 1 st to June 1 st	No ground based operations within the units	To minimize soil compaction
Critical spotted owl nesting March 1 st to July 15 th	No timber cutting and road construction	To minimize disturbance to nesting spotted owls

All proposed thinning areas will be ground-based logged. All logging activities will utilize the Best Management Practices (BMP's) required by the Federal Clean Water Act (as amended by the Water Quality Act of 1987) (RMP Appendix C-ppC-1 through C-10) (Instruction Memorandum No. OR-2011-074 Attach. 1).

During periods of heavy precipitation, the contract administrator may restrict log hauling when road conditions become susceptible to sediment directly or indirectly running into streams.

Fuel treatments will include directional falling and reduction of surface fuels where necessary to reduce the potential and intensity of a burn. Fuel reduction techniques may include; piling and burning or machine processing of material or pull back. Slash will be piled and burned in the low density thinning areas.

B. Land Use Plan Conformance:

This project falls into Northwestern and Coastal Oregon ROD/RMP category I (2016 ROD/RM pp. 10-11).

I. Projects Begun Prior to the ROD/RMP, but Decided After the ROD/RMP

The BLM signed a Record of Decision approving the Northwestern and Coastal Oregon Resource Management Plan (2016 ROD/RMP) on August 5, 2016.

Revision of an RMP necessarily involves a transition from the application of the old RMP to the application of the new RMP. The planning and analysis of future projects such as timber sales requires several years of preparation before the BLM can design a site-specific project and reach a decision. Allowing for a transition from the old RMP to the new RMP avoids disrupting the management of BLM-administered lands and allows the BLM to utilize work already begun on the planning and analysis of projects.

The 2016 ROD/RMP (pp. 10-11) allows the BLM to implement projects consistent with the management direction of either the 1995 RMP or the approved RMP, at the discretion of the decision maker, if—

- The BLM had not signed a project-specific decision prior to the effective date of the ROD;
- The BLM began preparation of NEPA documentation prior to the effective date of the ROD; and
- The BLM signs a project-specific decision on the project within two years of the effective date of the ROD.

The Cascades Field Office began preparation of NEPA documentation prior to the effective date of the 2016 ROD/RMP, as the District initiated planning and NEPA documentation for this project on December 6, 2013. This project was designed to conform to and be consistent with the Salem District's 1995 Record of Decision and Resource Management Plan (1995 ROD/RMP).

This project meets the criteria described in the 2016 ROD/RMP that allows the BLM to implement projects that conform and are consistent with the 1995 ROD/RMP, with the exception of five categories of prohibited carry-over actions (2016 ROD, p. 10). The Jungle Gem Thinning project does not include any actions that are excepted and therefore precluded from the 2-year transition period under the 2016 ROD/RMP.

1. Regeneration harvest (construction of roads or landings does not constitute regeneration harvest) within the Late-Successional Reserve allocated by this ROD that is inconsistent with the management direction for the Late-Successional Reserve contained within the approved RMP.

The Jungle Gem Thinning Project does not proposed any regeneration harvest on any land use allocation within the proposed unit areas.

2. Issuance of right-of-way grants within the Late-Successional Reserve allocated by this ROD that are inconsistent with the management direction for the Late-Successional Reserve contained within the approved RMP.

The Jungle Gem Thinning Project does not propose any right-of-way grants connected to the timber harvest within the Late-Successional Reserve contained within the approved RMP. Less than 0.5 miles of temporary roads will be constructed with no right-of-way grants issued. A license agreement for proposed temporary road P3 will be issued in order to cross Oregon Department of Forestry lands. However, this proposed road is outside of the Late-Successional Reserve contained within the approved RMP.

3. Commercial thinning within the inner zone of the Riparian Reserve allocated by this ROD that is inconsistent with the management direction for the Riparian Reserve contained within the approved RMP.

The Jungle Gem Thinning Project does not propose any commercial thinning within the inner zone of the Riparian Reserve. The proposed project units were modified to exclude the inner zone of the Riparian Reserves.

4. Projects within the District-Designated Reserve – Lands Managed for their Wilderness Characteristics allocated by this ROD that are inconsistent with the management direction for the District-Designated Reserve – Lands Managed for their Wilderness Characteristics contained within the approved RMP.

The Jungle Gem Thinning Project does not propose any commercial thinning within District-Designated Reserve-Lands Managed for their Wilderness Characteristics allocated by the 1995 RMP/ROD and the 2016 RMP/ROD. Because of this, there are no inconsistencies between management directions from the two RMPs/RODs.

5. Timber harvest that would cause the incidental take of Northern spotted owl (NSO) territorial pairs or resident singles and does not have a signed Biological Opinion and Incidental Take Statement that predates the effective date of the Biological Opinion for the approved RMP.

The Jungle Gem Thinning Project was designed to not cause incidental take of spotted owl territorial pairs or resident singles. The project area was surveyed for spotted owls because it was determined to be dispersal habitat within the provincial home range of a once occupied nest. Surveys for spotted owls were completed in the project area by the Oregon Department of Forestry through the Cascades Spotted Owl Survey Cooperative for the BLM following survey protocol in 2014, 2015, and 2016. No spotted owl responses were recorded or observed.

Based on scientific research, incidental take of spotted owls can include modification of habitat in a known site and disruption from noise during the critical nesting season (March 1 - July 15). Recovery Action 10 of the 2011 Revised Recovery Plan for the Northern Spotted Owl suggests to conserve known sites having more than 50% suitable habitat in the Core Area and 40 % suitable habitat in the Home Range. The BLM and the USFWS use the 50% Core Area and 40% suitable habitat parameters to evaluate the possibility of incidental take. The Jungle Gem Thinning Project was designed to not affect suitable habitat and to maintain dispersal habitat, hence there will be no incidental take of spotted owls from habitat modification.

The Jungle Gem Thinning Project is covered under the 2015 Willamette Planning Province Not Likely to Adversely Affect-Letter of Concurrence Regarding the Effects of Habitat Modification Activities (FWS Reference 01EOW00-2015-0147). The USFWS identifies distances and time-frames for incidental take from disruption on page 20 of the 2015 Letter of Concurrence. The Jungle Gem Thinning Project will only be occurring in the outer portion of the home range and not in the core area. Seasonal restrictions during the critical nesting season (March 1st to July 15th) will prevent any logging activities. Since the project is both spatially and temporally removed, no disturbance or disruption to spotted owl pairs will occur and therefore no incidental take from noise is anticipated.

Land Use Plan Name: Salem District Record of Decision and Resource Management Plan (1995 RMP) **Date Approved:** March 1995 **Date Amended:** The 1995 RMP was amended in January 2001 as documented in the Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and Other Mitigation Measures Standards and Guidelines, dated January 2001 (SM/ROD) as amended by the July 2011 Settlement Agreement..

The Proposed Action is in conformance with the Land Use Plan (LUP) because it is specifically provided for in the following LUP decision(s):

1995 RMP p.15 – in Late Successional Reserves: Protect and enhance conditions of late successional and old growth forest ecosystems.

1995 RMP p.24 - in Riparian Reserves: Design and implement wildlife habitat restoration and enhancement activities in a manner that contributes to attainment of Aquatic Conservation Strategy objectives.

1995 RMP Appendix D-5: Forest stands less than 80 years of age within most Late-Successional Reserves would be considered for silviculture treatments where stocking, structure, or composition are expected to prevent or significantly retard development of late-successional conditions.

C. Compliance with NEPA:

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 516 DM 11.9 (C.7) which allows for harvesting of live trees not to exceed 70 acres, requiring no more than 0.5 miles of temporary road construction.

The Habitat Improvement Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 516 DM 11.9 A (3) which allows for construction of perches, nesting platforms, islands, and similar structures of wildlife use.

Table 3: Categorical Exclusions: Extraordinary Circumstances Review

Table 3: Categorical Exclusions: Extraordinary Circumstances Review (43 CFR 46.215)		
Will the Proposed Action documented in this Categorical Exclusion	Yes	No
(a) Have significant impacts on public health or safety?		No
<p>Rationale: Commercial thinning will have no impacts on public health or safety. All activities associated with the proposed commercial thinning will conform to established Occupational Safety and Health Administration rules concerning health and safety.</p>		

Table 3: Categorical Exclusions: Extraordinary Circumstances Review
(43 CFR 46.215)

Will the Proposed Action documented in this Categorical Exclusion	Yes	No
<p>(b) Have significant impacts on such natural resources and unique geographic characteristics as: historic or cultural resources, park, recreation or refuge lands, wilderness areas, wild or scenic rivers, national natural landmarks, sole or principal drinking water aquifers, prime farmlands, wetlands, floodplains, national monuments, migratory birds, other ecologically significant or critical areas?</p> <p>Rationale: The project area is not located in any park, recreation or refuge lands, wilderness areas, wild or scenic rivers, or national natural landmarks. There are no floodplains, prime farmlands, wetlands, national monuments, or other ecologically significant or critical areas present in the treatment area. There are no identified historic or cultural resources in the project area.</p> <p>If during project activities any archaeological or historical resources are discovered, all activities must cease until a professional archaeologist can be present in order to access the significance of the discovery and determine the appropriate mitigation measures.</p> <p>Commercial thinning may alter in the short term but will not eliminate the ability of the stand to provide habitat for migratory birds, nor appreciably alter the function or abundance or mid-seral forest habitat provided by BLM-administered lands in the watershed.</p>		No
<p>(c) Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2) (E)]?</p> <p>Rationale: The effects of this commercial thinning are not controversial and there are no unresolved conflicts concerning alternative uses of available resources.</p>		No
<p>(d) Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?</p> <p>Rationale: Commercial thinnings are not unique or unusual. The BLM has experience implementing similar actions in similar areas without highly controversial, highly uncertain, or unique or unknown risks.</p>		No

Table 3: Categorical Exclusions: Extraordinary Circumstances Review
(43 CFR 46.215)

Will the Proposed Action documented in this Categorical Exclusion	Yes	No
<p>(e) Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?</p> <p>Rationale: Implementation of commercial thinning do not set a precedent for future actions that may have significant effects, nor does it represent a decision in principle about a future consideration. Commercial thinning is a widely used silviculture practice on BLM-administered lands.</p>		No
<p>(f) Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects?</p> <p>Rationale: There are no cumulative effects associated with the proposed project; therefore there are no significant cumulative effects as a result of these actions.</p> <p>Commercial thinning of these areas will not alter the forest age class distribution of BLM lands in the watershed.</p> <p>The low density thinning prescription will not create enough canopy gaps across an area sufficient to alter timing or magnitude of peak and base flows in the watershed. There will be no increase in permanent road density or flow routing by roads which will affect stream flows. The project neither builds a road in riparian areas nor creates a routing path for water and sediment to reach a creek; therefore the temporary roads will not general off-site effects. This project is unlikely to result in a detectable increase in sediment supply to surrounding streams and therefore unlikely to add cumulatively to sediment levels.</p>		No
<p>(g) Have significant impacts on properties listed or eligible for listing, on the National Register of Historic Places as determined by either the bureau or office?</p> <p>Rationale: Surveys conducted by the BLM have not identified any cultural or historical resources that will be affected by the proposed commercial thinning.</p>		No

Table 3: Categorical Exclusions: Extraordinary Circumstances Review (43 CFR 46.215)		
Will the Proposed Action documented in this Categorical Exclusion	Yes	No
<p>(h) Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?</p> <p>Rationale: The Proposed Action would have no effect on Upper Willamette River (UWR) winter steelhead and UWR spring chinook salmon. The thinning project is about 3 miles upstream of winter steelhead habitat in Abiqua Creek and more than 15 miles upstream of spring Chinook habitat. The Proposed Action would have no effect on Northern spotted owls because of the critical nesting timing restriction for the project where no timber cutting and road construction would occur from March 1st to July 15th (see Table 2).</p>		No
<p>(i) Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment?</p> <p>Rationale: Commercial thinning will follow all known Federal, State, or local or Tribal laws or requirements imposed for the protection of the environment. The Proposed Action is designed under the 1995 Salem District ROD/RMP, which complies with all applicable laws such as the Federal Land Policy Management Act, Endangered Species Act, Historic Preservation Act, Clean Water Act and others. The Proposed Action meets the criteria described in the 2016 ROD/RMP that allows the BLM to implement projects that conform and are consistent with the 1995 ROD/RMP and was designed to not include any of the five actions that are excepted under the 2-year transition period (see above under <i>Land Use Plan Conformance</i>).</p>		No
<p>(j) Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898)?</p> <p>Rationale: The Proposed Action will not have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.</p>		No

Table 3: Categorical Exclusions: Extraordinary Circumstances Review (43 CFR 46.215)		
Will the Proposed Action documented in this Categorical Exclusion	Yes	No
(k) Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)? Rationale: There are no identified sacred, ceremonial or religious Indian sites within this area. This determination is based on past scoping for similar projects in this area.		No
(l) Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)? Rationale: Pressure washing or steam cleaning equipment will be required prior to move-in to remove any soil or other materials that may be contaminated with seed or other propagative material as a means of reducing the risk of introducing any spread of noxious weeds or non-native invasive species into the project area.		No

This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. The Proposed Action has been reviewed, and none of the 12 extraordinary circumstances described in 43 CFR Part 46, Section 46.215 (see Table 3, above) apply.

There is no potential for significant impacts for the following reasons:

- The Proposed Action will follow the above listed Project Design Features included in the Proposed Action;
- The Proposed Action complies with the 1995 ROD/RMP and meets the criteria described in the 2016 ROD/RMP that allows the BLM to implement projects that conform and are consistent with the 1995 ROD/RMP and was designed to not include any of the five actions that are excepted under the 2-year transition period;
- The Proposed Action has the same or similar effects as the actions described in 516 DM 11.9 (C.7); and
- None of the 12 extraordinary circumstances apply to the Proposed Action.

D. Signature:

Specialist Review and Concurrence:

☐ None required or

Review Required	Review Not Required	Resource	Name	Initial
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Aquatic/Fisheries	<i>BW Zeller</i>	<i>BWZ</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Botany	<i>Chris M</i>	<i>TCF</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cultural Resources	<i>F. Gressore</i>	<i>FWG</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Engineering	<i>Don Nevin</i>	<i>DN</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Hydrology	<i>Patricia Hesse</i>	<i>WPH</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NEPA Compliance	<i>Wm. J. Smith</i>	<i>WJS</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	NRSA	<i>Paul Smith</i>	<i>PS</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Recreation	<i>Traci Medda</i>	<i>TMM</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Silviculture	<i>Dugan Bonney</i>	<i>DPB</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Team Lead	<i>Bonnie J. Taylor</i>	<i>BJT</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Timber	<i>John Bennett</i>	<i>JB</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Wildlife	<i>James J. England</i>	<i>JJE</i>

*Silviculture**Cali Lopez**GM 01/01/2016**KJR 5-3-2016*

**U.S. DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT
SALEM DISTRICT, CASCADES FIELD OFFICE**

Decision Record

The Proposed Action is a commercial thinning of conifer stands approximately 73 years old within 47 acres of Late Successional Reserve (LSR) and 3 acres of Riparian Reserve (RR) Land Use Allocations (LUA) for a total of 50 acres. The stand is primarily western hemlock (*Tsuga heterophylla*) and Douglas-fir (*Pseudotsuga menziesii*), with an understory of sparse sword fern (*Polysitichum munitum*).

Approximately 0.32 miles of temporary road will be built and decommissioned to access the units and reduce skidding length. Three one acre low density thinning patches will be created to encourage early-seral vegetation and wildlife habitat diversity. One to two trees per acre will be girdled to accelerate additional snags for habitat improvement.

Based on the above project description and Project Design Features in the Categorical Exclusion Documentation DOI-BLM-ORWA-S040-2013-0005-CX (CX pp. 1-4), I have determined that the Proposed Action, commercial thinning of 50 acres of a 73 year old timbered stand, involves no significant impacts to the human environment and requires no further environmental analysis.

There is no potential for significant impacts for the following reasons:

- The Proposed Action will follow the above listed Project Design Features included in the Proposed Action;
- The Proposed Action complies with the 1995 ROD/RMP and meets the criteria described in the 2016 ROD/RMP that allows the BLM to implement projects that conform and are consistent with the 1995 ROD/RMP and was designed to not include any of the five actions that are excepted under the 2-year transition period;
- The Proposed Action has the same or similar effects as the actions described in 516 DM 11.9 (C.7); and
- None of the 12 extraordinary circumstances apply to the Proposed Action.

It is my decision to implement commercial thinning of all areas as described in the attached Categorical Exclusion Documentation DOI-BLM-ORWA-S040-2013-0005-CX.

The decision described in this document is a forest management decision and is subject to protest by the public. In accordance with Forest Management Regulations at 43 CFR 5003, protests of this decision may be made within 15 days of the publication of a notice of decision in a newspaper of general circulation. The notice for this decision will appear in The Molalla Pioneer on September 28th, 2016. The planned sale date is October 26th, 2016. To protest this decision a person must submit a written protest to Chris Papen, Acting Cascades Field Manager, 1717 Fabry Rd SE, Salem, Oregon 97306 by the close of business (4:30 p.m.) on October 12th, 2016. The regulations do not authorize the acceptance of protests in any form other than a signed, written and printed original that is delivered to the physical address of the advertising BLM office.


The protest must clearly and concisely state the reasons why the decision is believed to be in error.

Any objection to the project design or my decision to go forward with this project must be filed at this time in accordance with the protest process outlined above. If a timely protest is received, this decision will be reconsidered in light of the statements of reasons for the protest and other pertinent information available and shall serve a decision in writing on the protesting party (43 CFR 5003.3).

Implementation: This project will be implemented in the spring and summer of 2017.

Contact Person: For additional information concerning this CX review, contact Bonnie Trefren, Forester, Salem District Office, 1717 Fabry Rd SE, at 503-315-5908.

Authorized Official: _____



Chris Papen
Acting Field Manager, Cascades Field Office

Date: 9-22-2016

E. Response to Comments

A scoping letter dated December 6, 2013 was sent to 71 potentially affected and/or interested individuals. Three (3) individual letters with several comments were received:

Comment suggesting an increase in the size and amount of low density patches:

The proposed project is within the Late Successional Reserve (LSR) and as such we are limited to the guiding documents within this land use allocation for size and number of patches.

Comment suggesting taking advantage of the opportunity to create, retain and protect coarse woody debris and snags:

All snags 15 feet tall and 15 inches DBH and larger and coarse woody debris 20 feet in length and 20 inches in diameter and larger will be retained as much as possible. Additional trees will be marked around snags to protect them during logging operations. The proposed project allows for 1 to 2 green trees per acre to be girdled to accelerate the development of snags and later serve as coarse woody debris.

Comment suggesting the consideration of the cost of road building so that it does not outweigh the benefit of treatment.

Potential roads are evaluated by the Specialists to determine the best location, length, and surface type for an economically and environmentally sound road system.

Comment to avoid the spread of weeds.

The BLM requires equipment coming onto BLM lands to be cleaned prior to entry. This is enforced through the Timber Sale Contract.

Comment about utilizing biomass and ensuring the impacts are fully disclosed.

This project does not propose any biomass projects.

Comment suggesting an alternative that addresses carbon storage and climate impacts by deferring cutting of large trees and thinning only younger trees.

The project is reserving trees 21 inches DBH and over. The thinning is to remove select trees under 21 inches DBH and smaller to allow for more growing space. Carbon analysis has been completed on other similar projects and past analysis has concluded that carbon emissions are of such small magnitude that it is unlikely to be detectable on any scale.

Comment suggesting that the Pechman Exemption is not eligible if there is distinguishable legacy trees of more than 2 per acre that are not part of the younger stand.

The stand proposed for thinning is less than 80 years of age and there are fewer than 2 legacy trees per acre, thus surveys for Survey and Manage species are not required.

Decision Record for Jungle Gem Thinning covered by DOI-BLM-ORWA-S040-2013-0005-CX

Comments about thinning in Riparian Reserves

- *Thinning trees that are of pool forming size just captures the mortality and removes the trees from pool forming recruitment.*
- *Small wood in streams can be ecologically functional and so they shouldn't be discounted.*
- *Streams should be buffered.*

A thinning from below removes select trees (under 21 inches DBH) from the stand allowing for more growth and future availability of larger trees for snag recruitment. There will be a “no harvest” buffer of 120 feet on both sides of the stream. The immediate small diameter trees adjacent to the streams will not be cut and will allow for immediate recruitment of small coarse woody debris. Some smaller diameter trees may experience adverse impacts due to logging operations; however a majority will be retained throughout the unit.

Comments about thinning

- *Use variable density thinning*
- *Stands that are 73 years or older do not need to be thinned.*
- *Thinning retards the development of late successional forests*
- *Thinning should be used sparingly*
- *Provide generous unthinned patches*
- *Thin heavy enough to stimulate understory vegetation but not too heavy*
- *Thinning is most beneficial in young stands*
- *Thinning produces fewer large dead trees*
- *Commercial thinning can accelerate very large diameter trees*
- *Variation in thinning is essential*
- *Ecological effect of thinning need to be placed in the context of watersheds*

Thinning is a management tool used to accelerate desired future stand characteristics to meet the requirements of the Salem District RMP for each LUA. This particular forest stand was chosen for thinning treatment due to the high density of trees per acre. Thinning for late seral characteristics including the attainment of large trees for future snags and coarse wood is an objective of the LSR LUA. Thinning from below removes the suppressed intermediate trees allowing for more growing space of the remaining larger trees. It also opens up the understory to more light allowing for diverse understory vegetation to grow.

Comments that thinning captures mortality which reduces and delays recruitment of dead wood which is necessary for meeting LSR, ACS and RR objectives.

Thinning temporarily reduces and captures mortality within the stand. However, the objective of the Decision Record for Jungle Gem Thinning covered by DOI-BLM-OR-S040-2013-0005-CX the proposed thinning is to increase tree growth for future large snags and coarse wood. The immediate small diameter trees adjacent to the streams in the “no harvest” buffers and untreated areas in the vicinity of the project will allow for immediate recruitment of small coarse woody debris. Immediate recruitment of snags and coarse woody debris will occur by girdling 1 to 2 green trees per acre after the thinning is completed.